

Indian Journal of Traditional Knowledge
Vol 18(4), October 2019, pp 824-829

The knowledge and attitudes towards recent regulations on complementary and alternative medicine among students and faculty members in Bezmialem University School of Medicine (BVUSOM)

Bedia Özyıldırım^{*1,†}, Ozlenen Eylül Ince², & Perihan Torun³

¹Department of Public Health, School of Medicine, Bezmialem Vakif, University, Istanbul, Turkey

²Intern, School of Medicine, Bezmialem Vakif University, Istanbul, Turkey

³Public Health Specialist, Free Researcher

E-mail: [†]bozyildirim@bezmialem.edu.tr

Received 16 January 2019; revised 22 July 2019

Turkish government published a 'Regulation on Traditional and Complementary Medical Therapies' (CAM) in 2014. We aimed at assessing the knowledge and the thoughts of medical students and faculty members of BVUSOM on this regulation of Ministry of Health. All the students and faculty members were included in the research (in 2017-2018 academic year). Five hundred thirteen medical faculty students (68.8% of all students) and 90 teaching faculty members (57.7% of the all faculty members) participated to the study. One hundred and forty-eight (28.8%) of the students and 57 (63.3%) of faculty members reported that they know the legal regulation. At least one of the treatment methods suggested in the regulation was applied by 83 (16.2%) of the students. Four hundred (77.9%) of the students and 61 (67.8%) of the faculty members would like to be educated well enough so that they could treat their patients in any area of CAM. Medical students were more likely to show interest in receiving a training in CAM techniques than faculty members ($p=0.03$).

As CAM is still very new area of interest in Turkey. There are several strategies to integrate it to current medical education, including: embedding lectures, organizing multidisciplinary meetings, scheduling elective rotations and informing faculty members.

Keywords: Medical student, Training, Regulation, Therapies, Complementary

IPC Code: Int. Cl.¹⁹: G09B 5/14, B64D 23/00, B01D 3/42, A61N 5/00, H01L 21/8228

Complementary and Alternative Medicine (CAM) is a practice of medicine that uses natural substances, special chemical solutions and different treatment and exercise methods in order for the patient to preserve his health and to know himself better. Furthermore, it allows the patient to form better relations with his body, his soul, his family and his environment. CAM mainly has its roots from ancient Chinese and Indian medicine and is practiced in the entire world to various extents¹. It also has a widespread use in our country especially in oncology^{1,2}. Modern medicine excludes CAM practices due to the absence of evidence that support their use however both the number of CAM practices and the familiarity of our society on them are increasing steadily³.

It is reported that the frequency of patients using CAM practices fluctuates between 9 to 65% in the world³. In Turkey, this frequency is between 12.6 to

76% as reported by Gungormus and Kıyak³. In a European study, the frequency of patients who used CAM practices at least once in their lifetime was found to be between 0.3 and 86%⁴. Furthermore, the authors also emphasized that there is widespread non reported use of CAM practices as well. By taking non-reported use into consideration, it is justified to think that the frequency of CAM use among patients could be much higher than measured by these studies both in Turkey and in the world⁴.

According to the European Federation of Complementary and Alternative Medicine (EFCAM); complementary and alternative medicine (CAM) are therapy methods which are used in health promotion and treatment and can be used alone or in combination with modern medical approaches⁵. CAM's particular strength is a combination of personalized health, health prevention and a noninvasive disease treatment as an integrated package⁶.

^{*}Corresponding author

In 2014, first legal regulation in Turkey was announced. This regulation allowed health care professionals to be certified after performing 15 procedures under the supervision of a physician. These procedures involve Cupping Therapy (with cupping glasses), Acupuncture, Apitherapy, Physiotherapy, Hypnosis, Leech Therapy, Homeopathy, Chiropractic Care, Maggot (larvae) Therapy, Mesotherapy, Ozone Therapy, Prolotherapy, Reflexology, Osteopathy and Music Therapy⁷.

Bezmialem University School of Medicine (BVUSOM) was founded in 1845 and is one of the most historical hospitals in Turkey. Also, our university is the only health sciences university in Turkey that has one of the 12 CAM centers across the country. In 2015 it established the first CAM and physiotherapy center in Turkey. Hence it plays a leading role in determining public policy on CAM by conducting scientific projects and providing high quality scientific data.

The aim of this study was to measure the level of awareness of medical students and faculty members of BVUSOM on CAM practices and the Ministry of Health's regulations on CAM. Furthermore, the same study group's willingness on receiving more training on CAM was also evaluated. The data of the study will also contribute to there vision of the academic curriculum.

Methodology

Participants

The study was carried out in BVUSOM in 2017-2018 academic year. No sample was taken and all the students and faculty members of the School of Medicine were included in the research. In the medical schools, there are at total of 736 students and 156 faculty members. Five hundred thirteen medical students (68.8% of all the medical students) and 90 faculty members (57.7% of all the faculty) participated to the study.

Questionnaire Forms

A multi-question interview form; questioning the knowledge, approaches and training needs of the participants regarding complementary and alternative medicine therapies within the scope of the related regulation in our country has been applied to the Faculty of Medicine students and faculty members both by using digital media and using face to face interview technique when necessary. With this form, only GETAT (Turkish abbreviation

of Complementary and alternative medicine) applications which were regulated by the regulation in our country were evaluated. In the interview form, knowing a CAM method is defined as knowing only the main titles and contents of that method.

Ethic situation

Bezmialem University Clinical Trials Ethics Committee granted the necessary permissions with the number 16/237 dated September 12th, 2017.

Statistical Analysis

The data were analyzed with SPSS program. Chi-square, frequency and percentage rates are calculated.

Results

Ninety faculty members and 513 students participated in the study. Fifty-seven (63.3%) of the faculty members and 148 (28.8%) of the students were aware of the legal arrangements for traditional and complementary medical practices in our country.

Names of the procedures and the familiarity of the participants to these procedures are summarized in Fig. 1 & Fig. 2.

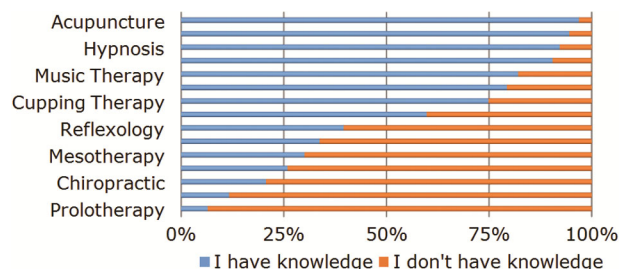


Fig. 1 — The Knowledge Level of Students about Complementary and Alternative Medicine

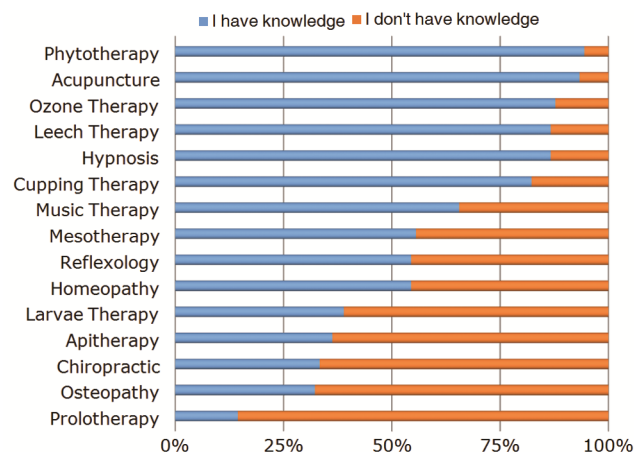


Fig. 2 — The Knowledge Level of Faculty Members About Complementary and Alternative Therapy

The students had the most knowledge about Acupuncture (n=497, 96.9%), Leech Therapy (n=485, 94.5%), and Hypnosis (n=92.2%). There was no participant who can use these methods on their patients. Chiropractic, Apitherapy and Prolotherapy were the GETAT methods known at the lowest rates. Students reported that at least one of these treatments were performed on them (n=83, 16.2%) or their relatives (n=285, 55.6%). Acupuncture and cup were frequently applied to students, and acupuncture cups and leeches were applied to their relatives. The purpose of applying GETAT to the students and their relatives summarized in Table 1.

Four hundred (78%) of the students wanted to study at any level of GETAT practice to be able to treat their patients. They reports the reasons as:

- "If I have enough knowledge about CAM methods, I can guide my patients more effectively during decision making process.
- "I can include scientifically supported CAM practices into my medical practice."
- "I can prevent unsafe practice of CAM methods at the hands of charlatans thus protect my patients from possible complications
- "I would rather be a doctor who can include natural therapies with less side effects to his treatment practice than a doctor who only prescribes certain medicines"
- "I can give more hope to my patients and have a more holistic approach. Even if the CAM treatments only had placebo effect, their use would still make sense."

All of the students who want to be trained in CAM methods want this training to be in a form of practice oriented elective course without tests or academic credits.

Students who do not want to get training on CAM stated that they have doubts about the scientific evidence. They also claimed that their education programs are already very intense and they do not have enough time. One student noted that if he/she

become a Physical Medicine and Rehabilitation doctor one day, he/she would be interested in these treatment in order to earn more money.

Most familiar treatment methods to faculty members were physiotherapy (n=85, 94.4%), acupuncture (n=3, 3.3%) and ozone (n=79, 87.8%). Chiropractic, Osteopathy and Prolotherapy were the least known GETAT methods in a similar way to the students.

Approximately one in four (n=22, 24.4%) faculty members reported that their patients were using GETAT practices. However, they emphasized that all of these practices are used as complimentary to evidence based modern medical practice. At least one close relative of 49 faculty members were treated with a GETAT method in the past. Sixty-one (67.8%) of the faculty members wanted to get educated about GETAT methods in order to help their patients by providing them with accurate information, to protect them from the nonmedical performers and to use data to strengthen the evidence behind these practices. Twenty-nine (33.2%) of the faculty members reported that they did not want to get an education. They think that there is insufficient evidence behind these treatment methods and they re unreliable. Bezmialem Medical Faculty medical students showed more interest in getting CAM training compared to Bezmialem Medical School Faculty members (p=0.03, chi square=4.42).

Discussion

CAM practices are formed by a society's culture, religion and philosophy. They differ from modern medicine practices that are currently in use³. Our country has a considerable amount of background in CAM practices due to its unique geographical and cultural position. However, the process of integrating these practices with modern medicine is ongoing. CAM practices, although previously scorned by health care providers, are being studied with renewed interest. The prejudices and taboos surrounding CAM are being eliminated. In Turkey, the first legal regulation on CAM was announced in 2014 by

Table 1 — Objectives of GETAT Practices of Students and their Relatives

	Students n	(n=83)* %	Students' (n=285)* n	Relatives %
It was used for treatment without medical treatment.	34	40.1	116	40.1
It was used as an adjunct to medical treatments	35	42.2	139	48.8
It was used to prevent diseases while healthy.	35	42.2	45	15.8

*Some participants marked more than one answer.

Ministry of Health. With these regulation, rules and practices regarding the training on CAM and their practice were set⁷. Furthermore, Turkish Social Security System vowed to reimburse providers on certain CAM practices such as bloodletting and prolotherapy⁸. In order to support Complementary Medicine practices, the Ministry of Health initiated a budget plan to cover a portion of Complementary Medicine's expenses from the Social Security Institution⁸. After these developments, many CAM centers started to be established in medical faculties throughout Turkey. Also, the public support for these practices have increased as they are familiar to the collective memory. In 2018, Turkish Ministry of Health has created initiatives and conferences to reach global standards and to counter the negative impression in areas such as science, culture and sociology and to integrate Modern and Complementary Alternative Medicine⁹.

In our study, 83 (16.2%) of students and 285 (55.6%) of their relatives underwent at least one CAM method. In the study of Doğanay and colleagues, this rate was found to be 37%. In this study only regulated methods are described. In Doganay's study, however, non-regulated methods are also measured such as religious rituals, praying, massage and other relaxation exercises. It was found that the praying was found to be used at the highest rate (32%) compared to others. In his study, 18.4% of cases was for treatment, 15.4% of the cases was as an adjunct to treatment and 8.9% of cases was as a prophylaxis¹⁰. In our study, rates were found to be 34 (40.1%), 35 (42.2%), 35 (42.2%) respectively.

The use of complementary medicine for preventive care is remarkable. In the study of Ergin and colleagues the most familiar CAM method was Acupuncture with a rate of 72.3%. The same rate was 78.5% in Altan's study. In our study the rate was 96.9% (n=497)^{2,1}.

The awareness of acupuncture has increased over the years. In a study of Elbi and colleagues, the rate of use of CAM methods by primary care physicians (PCP) in clinical practice was 75.6%. The PCPs with an experience of 10 years or less used it with a rate of 35.6% while the PCPs with an experience of 10 years or more used it with a rate of 64.4%. In the study, 63% of PCPs reported that they believe in CAM methods^{5,11}. In our study the rate of faculty members who applied CAM methods to their patients were found to be 22 (24.4%). However, 61 (67.8%) were

found to be willing to receive a training in these practices. In the study of Araz and colleagues the rate of students who used CAM methods was found to be 40.6%. Green tea, olive oil, massage and acupuncture were found to be most commonly used methods¹². In the study of Watane be and colleagues of 2001 in Japan showed that acupuncture was found to be most reliable and effective CAM method by doctors¹³. There are numerous studies that measured the interest of medical students in CAM methods. In these studies, the level of interest of medical students in CAM methods were always found to be greater than the level of interest of doctors¹⁴. Also, in our study, the rate of medical students who wanted to get a training in CAM was significantly higher than the rate of faculty members who wanted to get a training (p=0.03). In our country, medical students are taught with classical western medicine for years. The courses that discuss the holistic and traditional medical practices have recently beg unto be introduced to the curriculum. Therefore, young doctors and medical students can analyze GETAT practices with less bias.

In a survey conducted at 125 US medical schools found that 75 of them offered some form of education on complementary and alternative therapy in their curriculum¹⁵. In the study of Lee in 2014, 87.4% of medical students of Rochester University wanted training in CAM methods to be included in their curriculum¹⁶. In Georgetown University School of Medicine, this rate was found to be greater than 75%¹⁷. In another study, it was found that 81% of Canadian medical schools had training in CAM methods in their curriculum however the course contents need improvement¹⁸.

Abbot and colleagues reported that 64% of US medical schools included CAM training in their curriculum. The type of training was heterogeneous ranging from elective courses to seminars and lecturers¹⁹. Ahmed and colleagues reported that 74% of Riyadh Majmaah University Medical School students thought that CAM should be included in their curriculum so that they can give a more through medical care to their patients²⁰. The same rate in Gulhane Medical School was reported to be 64.9% in the study of Kılıç *et al.*²¹. In the study of Rao *et al* in Aberdeen University Medical School, 21% of medical students were found to be using complementary and alternative medicine currently. 21% used complementary and alternative medicine within the last 12 months and 24% had used complementary and

alternative medicine more than a year ago²². The most commonly mentioned complementary and alternative medicine were aloe vera, cod liver oil, and echinacea, used for immunity, concentration, and skin conditions, respectively. In the study of Chaterji *et al*, 85% of the preclinical students of Georgetown University School of Medicine thought that their experience in CAM practices would be invaluable for their future careers and 75% thought that training in CAM practices should be added to their curriculum¹⁷.

At this time, none of 84 Turkish medical schools offer training in CAM practices. WHO reported that in order to prevent deaths which would reach up to 52 million in 2030 due to non-infectious diseases, CAM practices should be taken into consideration as an additional measure which would only cost 1.2 dollar per person but could play an important role in disease prevention²³.

In a study among US adults, the rate of persons who used at least one CAM method was found to be 33.8% in 1990, 42.1% in 1997 indicating a rising trend in CAM use. In another study in US, the rate of CAM use among adults was found to be rising every year and changes between 9 to 65%²⁴.

Unfortunately, the majority of physicians do not get adequate training in CAM practices during their medical education. UK Medical Board advised that the UK medical students should be at least trained to make a judgement on these practices. The background for this advice was that 95% of physicians faced questions from their patients on CAM during their clinical practice. The German Bundestag passed a legislation in October 2003 making naturopathy a type of CAM practice and a compulsory part of medical school curriculum. World Federation of Medical Education (WFME) also recommended to include CAM training in its global standards on medical education²⁴.

In the daily practice, doctors should be able to inquire about patients' use of CAM practices in non-judgmental manner and should be able to provide adequate information regarding the benefits and risks of CAM practices including drug interactions and infection risks. The doctors should share these information with their patients. This would both help restore the confidence in doctors and modern medicine but also prevent patients from getting harmed. Therefore, not rejecting these practices allow further scientific research and also integrate the scientifically proven ones with the modern medicine.

The duty of the physicians in this regard is to warn the patients and their relatives on CAM practices that may harm. To assess the effectiveness of modern medical practices, many studies, primarily clinical trials, are being done based on standard epidemiological laws and subsequently the results are reported using proper statistical methods. This standardization allows easy decision making on the effectiveness of these methods. However, CAM methods are mostly tailored to a certain patient. As both protocols of their use and variables of follow up are not very standard, it is both unscientific and unfair to assess their effectiveness using classical epidemiological methods. Perhaps as the volume of studies on CAM grow, we would be able to analyze them using statistical methods like meta-analysis as used in modern medical studies. This area of study would be an exciting new field for the biostatistics. These practices would be able to enjoy higher level of scientific support in medical field only if the volume of reported studies grows. This would improve public health and reduce health care costs.

Training in CAM practices with small sample groups and with specific diseases such as cancer could be very informative²⁵. As CAM is still very new area of interest in Turkey. There are several strategies to integrate it to current medical education, including: embedding lectures, organizing multidisciplinary meetings, scheduling elective rotations and informing faculty members. Also developing websites for providing information on CAM practices to interested individuals with any level of background knowledge would help a lot in raising the awareness in CAM practices in Turkey. In this regard, especially the CAM centers in universities throughout Turkey could play a leading role.

References

- 1 Altan S, Rahman S, Çam S, Knowledge and Attitudes of Medical Students About Complementary and Alternative Medicine Methods, *Türkiye Klinikleri J Med Ethics*, (22) (2014) 81-88.
- 2 Ergin A, Hatipoğlu C, Bozkurt Aİ, Mirza E, Kunak K, Karan C, Özçelik G, Teğin C, Pazır Y, Pırtı I, Knowledge and attitudes towards complementary and alternative medicine among the medical students and medical residents, *Pamukkale Medical Journal*, 1(4) (2011) 136-143.
- 3 Güngörmüş Z, Kıyak, Evaluation of the knowledge, attitude and behavior of complementary and alternative therapies among patients with chronic pain, *Pain*, (24) (2012) 123-129.
- 4 Sözeri E, Kahraman B, Complementary Medicine Approaches from Patient and Nurse Perspective, *Balikesir Saglik Bil Derg*, (5) (2016) 39-42.

- 5 Şahin S, An overview of traditional, complementary, alternative medicine applications, *Türk Aile Hek Derg*, (21) (2017)159-162.
- 6 Hegyi G, Petri RP, Roberti di Sarsina P, Niemtzow R, Overview of Integrative Medicine Practices and Policies in NATO Participant Countries, *Med Acupunct*, (5) (2015) 318-327.
- 7 Gelenekselve Tamamlayıcı Tıp Uygulamaları Yönetmeliği. <http://www.resmigazete.gov.tr/eskiler/2014/10/20141027-3.htm>. Available at: 18.07.2019.
- 8 Ministry of Health. <https://e-saglik.gov.tr/TR,36025/227-geleneksel-ve-tamamlayici-tip-uygulamalari-veri-seti-eklenmistir.html> . Available at: 18.07.2019.
- 9 Uluslar Arası Gelenekselve Tamamlayıcı Tıp Kongresi, <http://2018.getatkongre.org/hakkinda.php> Available at: 18.07.2019
- 10 Doğanay S, Guzel D, Öztürk D, Tanyeli A, Complementary and alternative medicine: understanding, attitude and usage among Turkish health sciences and medical students, *J Contemp Med*, (8) (2018) 48-54.
- 11 Elbi H, Nazik F, Balcı U.G, Çölne N, Öngel K, Attitudes of a Group of Family Physicians on Complementary and Alternative Treatments, *TJFMPC*, (4) (2015) 170-175.
- 12 Çöl Araz N, Taşdemir H.S, Parlar Kılıç S, Evaluation of the Opinions of Faculty of Health Sciences Students on Alternative and Traditional Practices, *Gümüşhane University Journal of Health Sciences*, (4) (2012) 239-251.
- 13 Watanabe S, Imanishi J, Satoh M, Ozasa K, Unique Place of Kampo (Japanese Traditional Medicine) in complementary and alternative medicine: A survey of doctors belonging to the Regional Medical Association in Japan, *Tohoku J. Exp. Med*, (194) (2001) 55-63.
- 14 Lee AYS, Foong YC, Le HC, Complementary and alternative medicine and medical students in Australia: Where do we stand? *ASTRLSN Med J*, (5) (2012) 144-149.
- 15 Berman BM, Complementary medicine and medical education Teaching complementary medicine offers a way of making teaching more holistic, *BMJ*, (322) (2001) 121-2.
- 16 Lee PS, Lee T, Medical Student Attitudes towards Complementary and Alternative Medicine at the University of Rochester, *The Med Student Press J*, (1) (2014) 1-7.
- 17 Chaterji R, Tractenberg RE, Amri H, Lumpkin M, Amorosi SBW, Haramati A, A large-sample survey of first- and second-year medical student attitudes toward complementary and alternative medicine in the curriculum and in practice, *Altern Ther Health Med* (13) (2007) 30-35.
- 18 Verhoef M, Brundin-Mather R, Jones A, Boon H, Epstein M, Complementary and alternative medicine in undergraduate medical education,. *Can Fam Physician*, (50) (2005) 847-849.
- 19 Abbott RB, Hui K, Hays RD et al, Medical Student Attitudes toward Complementary, Alternative and Integrative Medicine, *J Evid Based Complementary Altern Med*, (1) (2011) 1-14.
- 20 Ahmed SM, Al-Mansour MA, Mohamed EY, Medani KA, Abdalla SM, Mahmoud WS, Medical Students' Opinion Toward the Application of Complementary and Alternative Medicinein Healthcare, *Saudi J Med Sci*, (5) (2017) 20-25.
- 21 Kılıç S, Oğur R, Yaren H, Akkoyun G, Küpçük E, Knowledge of and attitudes toward complementary and alternative medicine amongst medical students in a turkish medical school, *Pak J Med Sci*, (25) (2009) 319-324.
- 22 Rao A, Shakeel M, Trinidad A, Rao G, Pearce A, Ah-See KM, The Importance of Complementary and Alternative Medicine Education in Medical School, *J Evid Based Integr Med*, (17) (2012) 191-198.
- 23 Aslan R, Postmodern medical concept: evidence-based complementary medicine. / *Lake District Monthly Refereed Journal of Economics and Culture*, *Ayrıntı*, (63) (2018) 69-74.
- 24 Mollahaliloğlu S, How to develop an integrated approach in medical education? *Integr Tıp Derg*, (3) (2015) 48-49.
- 25 Hussain S, Malik F, Hameed A, Ahmed S, Humayun Riaz, Abbasi N, Malik M, Pakistani Pharmacy Students' Perception About Complementary and Alternative Medicine, *Am J Pharm Edu*, (76) (2012)76 :1-7.